

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS ✓
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Form PTO-1595
(Rev. 6-93)
OMB No 0651-0011 (exp. 4/94)

RECORDATION FORM COVER SHEET PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office
Box ASSIGNMENTS

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies):

Atsuo Kuki, Xinqiang Li, Michael Bruno Plewe, Hai Wang, Junhu Zhang

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Agouron Pharmaceuticals, Inc.

Internal Address: Patent Department

Street Address: 10777 Science Center Drive

City: San Diego State: CA ZIP: 92121

Additional name(s) & address(es) attached? ☒ Yes ☐ No

3. Nature of Conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date(s): Feb. 11, 2003, Feb. 12, 2003, Feb. 14, 2003

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: _____

A. Patent Application No.(s) 60/443,223

B. Patent No.(s) _____

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Jeffrey Rennecker

Internal Address: Pfizer, Inc.

Street Address: 10777 Science Center Drive

City: San Diego State: CA ZIP: 92121

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00

☐ Enclosed

☒ Authorized to be charged to deposit account

8. Deposit account number: 500329

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Jeffrey W. Rennecker (Reg. 40,784)

Name of Person Signing

Jeffrey W. Rennecker
Signature

February 18, 2003

Date

Total number of pages including cover sheet, attachments, and document: 10

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

2. Name of receiving party(ies): (C ntinued)

Pfizer Inc.

Street Address: 235 East 42nd Street

City: New York State: NY ZIP: 10017

ASSIGNMENT

For valuable consideration, the receipt and adequacy of which is hereby acknowledged, we, Atsuo Kuki of 1261 Rancho Encinitas Drive, Encinitas, California 92024; Xinqiang Li of 9372 Beak Point, San Diego, California 92129; Michael Bruno Plewe of 4711 Caminito Avenue, San Diego, California 92130; Hai Wang of 11087 Ice Skate Place, San Diego, California 92126; and Junhu Zhang of 3445 Lebon Drive #1423, San Diego, California 92122, respectively, hereby sell, assign and transfer unto AGOURON PHARMACEUTICALS, INC., a corporation organized and existing under the laws of the State of California, United States of America, and having a place of business at 10777 Science Center Drive, San Diego, California 92121, United States of America, our entire right, title and interest, except as limited herein below, in and to provisional patent application of the United States of America, having PFIZER INC. Docket No.: PC025050, entitled **HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE**; filed in the United States Patent and Trademark Office on **January 27, 2003** and assigned application number **60/443,223**; and our entire right, title and interest, in the United States of America, in and to all our inventions, whether joint or sole, disclosed in said patent application; and our entire right, title and interest in and to all applications filed in the United States of America for Letters Patent for any or all of said inventions; and our entire right, title and interest in and to all Letters Patent granted in the United States of America on the foregoing applications;

and we hereby sell, assign and transfer unto PFIZER INC., a corporation organized and existing under the laws of the State of Delaware, United States of America, and having a place of business at 235 East 42nd Street, New York, New York 10017, United States of America, our entire right, title and interest, in all countries of the world except the United States of America, in and to all our inventions, whether joint or sole, disclosed in said provisional patent application; and our entire right, title and interest in and to all patent applications filed outside the United States of America for Letters Patent for any or all of said inventions; and our entire right, title and interest in and to all Letters Patent granted outside the United States of America on said patent applications filed outside the United States of

America; and the right to claim priority from said provisional patent application under the Paris Convention for the Protection of Industrial Property, and under any and all other such treaties and agreements to which the United States of America is a party and which afford similar priority-claiming privileges, in all countries of the world except the United States of America;

and we hereby agree, whenever requested, to communicate to said AGOURON PHARMACEUTICALS, INC. and said PFIZER INC., and their successors and assigns, any facts known to us respecting said inventions, to testify in any legal proceeding respecting said inventions, and to execute all applications or papers necessary to obtain and maintain proper patent protection on said inventions in all countries of the world.

Signed and witnessed this _____ day of _____ at _____

Atsuo Kuki

In the presence of:

[print name here, sign above]

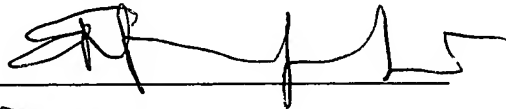
Signed and witnessed this Feb 14 day of 2003 at

11099 N. Torrey Pines La Jolla CA 92037



Xinqiang Li

In the presence of:



Erquang Li

[print name here, sign above]



Signed and witnessed this _____ day of _____ at

Michael Bruno Plewe

In the presence of:

[print name here, sign above]

Signed and witnessed this _____ day of _____ at _____

Hai Wang

In the presence of:

[print name here, sign above]

Signed and witnessed this _____ day of _____ at _____

Junhu Zhang

In the presence of:

[print name here, sign above]

ASSIGNMENT

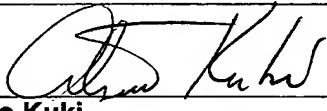
For valuable consideration, the receipt and adequacy of which is hereby acknowledged, we, Atsuo Kuki of 1261 Rancho Encinitas Drive, Encinitas, California 92024; Xinqiang Li of 9372 Beak Point, San Diego, California 92129; Michael Bruno Plewe of 4711 Caminito Avenue, San Diego, California 92130; Hai Wang of 11087 Ice Skate Place, San Diego, California 92126; and Junhu Zhang of 3445 Lebon Drive #1423, San Diego, California 92122, respectively, hereby sell, assign and transfer unto AGOURON PHARMACEUTICALS, INC., a corporation organized and existing under the laws of the State of California, United States of America, and having a place of business at 10777 Science Center Drive, San Diego, California 92121, United States of America, our entire right, title and interest, except as limited herein below, in and to provisional patent application of the United States of America, having PFIZER INC. Docket No.: PC025050, entitled **HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE**; filed in the United States Patent and Trademark Office on **January 27, 2003** and assigned application number **60/443,223**; and our entire right, title and interest, in the United States of America, in and to all our inventions, whether joint or sole, disclosed in said patent application; and our entire right, title and interest in and to all applications filed in the United States of America for Letters Patent for any or all of said inventions; and our entire right, title and interest in and to all Letters Patent granted in the United States of America on the foregoing applications;

and we hereby sell, assign and transfer unto PFIZER INC., a corporation organized and existing under the laws of the State of Delaware, United States of America, and having a place of business at 235 East 42nd Street, New York, New York 10017, United States of America, our entire right, title and interest, in all countries of the world except the United States of America, in and to all our inventions, whether joint or sole, disclosed in said provisional patent application; and our entire right, title and interest in and to all patent applications filed outside the United States of America for Letters Patent for any or all of said inventions; and our entire right, title and interest in and to all Letters Patent granted outside the United States of America on said patent applications filed outside the United States of

America; and the right to claim priority from said provisional patent application under the Paris Convention for the Protection of Industrial Property, and under any and all other such treaties and agreements to which the United States of America is a party and which afford similar priority-claiming privileges, in all countries of the world except the United States of America;

and we hereby agree, whenever requested, to communicate to said AGOURON PHARMACEUTICALS, INC. and said PFIZER INC., and their successors and assigns, any facts known to us respecting said inventions, to testify in any legal proceeding respecting said inventions, and to execute all applications or papers necessary to obtain and maintain proper patent protection on said inventions in all countries of the world.

Signed and witnessed this 11th day of February 2003 at
San Diego CA



Atsuo Kuki

In the presence of:





[print name here, sign above]

Signed and witnessed this _____ day of _____ at _____

Xinqiang Li

In the presence of:

[print name here, sign above]

Signed and witnessed this 12th day of February at
San Diego CA USA

Michael Bruno Plewe

Michael Bruno Plewe

In the presence of:

Danielle Dixon

Danielle Dixon

[print name here, sign above]

Signed and witnessed this 12 day of February at
20 San Diego, CA 92126, USA


Hai Wang

In the presence of:

Daniell Dixon

Danielle Dixon

[print name here, sign above]

Signed and witnessed this 12 day of Feb, 2003 at
San Diego, CA 92122


Junhu Zhang

In the presence of:

Daniell Dixon

Danielle Dixon

[print name here, sign above]

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	ATSUO KUKI
Title	HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	PC25051A

I hereby appoint:



Practitioners at Customer Number

28940

OR



Practitioners named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number.

OR



The address associated with Customer Number

OR

Firm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

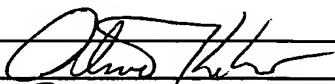
Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

ATSUO KUKI

Signature

Date


 Dec 9, 2003

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 5 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	ATSUO KUKI
Title	HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	PC25051A

I hereby appoint:



Practitioners at Customer Number

28940

OR

Practitioners named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number.

OR

The address associated with Customer Number

ORFirm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

MICHAEL BRUNO PLEWE

Signature

Michael Bruno Plewe

Date

15 Dec 2003

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 5 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY and CORRESPONDENCE ADDRESS INDICATION FORM

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	ATSUO KUKI
Title	HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	PC25051A

I hereby appoint:



Practitioners at Customer Number

28940

OR



Practitioners named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number.

OR



The address associated with Customer Number

OR

Firm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

XINQIANG LI

Signature

Date

12-06-2003

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 5 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	ATSUO KUKI
Title	HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	PC25051A

I hereby appoint:



Practitioners at Customer Number

28940

OR

Practitioners named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number.

OR

The address associated with Customer Number

ORFirm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

HAI WANG

Signature

Date

Dec. 9, 2003

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 5 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY
and
CORRESPONDENCE ADDRESS
INDICATION FORM**

Application Number	To be assigned
Filing Date	Herewith
First Named Inventor	ATSUO KUKI
Title	HIV-INTEGRASE INHIBITORS, PHARMACEUTICAL COMPOSITIONS, AND METHODS FOR THEIR USE
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	PC25051A

I hereby appoint:



Practitioners at Customer Number

28940**OR**

Practitioners named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The above-mentioned Customer Number.

OR

The address associated with Customer Number

ORFirm or
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.
*Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).***SIGNATURE of Applicant or Assignee of Record**

Name

JUNHU ZHANG

Signature

Date

Mr. 9. 2003

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 5 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☒ The attached application, or
- ☐ Application No. _____, filed on _____
- ☐ as amended on _____ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

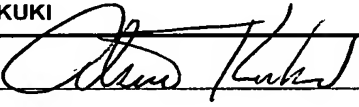
I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Inventor(s)


Inventor 1 ATSUO KUKI

Signature  Citizen of US

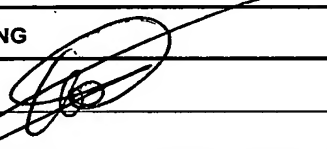
Inventor 2 XINQIANG LI

Signature _____ Citizen of US

Inventor 3 MICHAEL BRUNO PLEWE

Signature  Citizen of ~~US~~ GERMANY HP

Inventor 4 HAI WANG

Signature  Citizen of CHINA

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☒ The attached application, or
- ☐ Application No. _____, filed on _____
- ☐ as amended on _____ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Inventor(s)

Inventor 1 ATSUO KUKI

Signature _____ Citizen of US

Inventor 2 XINQIANG LI

Signature  Citizen of US

Inventor 3 MICHAEL BRUNO PLEWE

Signature _____ Citizen of US

Inventor 4 HAI WANG

Signature _____ Citizen of CHINA

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)**

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☒ The attached application, or
- ☐ Application No. _____, filed on _____
- ☐ as amended on _____ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

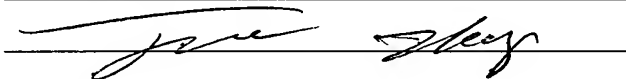
All statements made herein of my/own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

Full Name of Inventor(s)

Inventor 5

JUNHU ZHANG

Signature

Citizen of **CANADA**☐ Additional inventors are being named on

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.